IOWA GEOLOGICAL SURVEY
In Cooperation with U. S. Geological Survey

W-0020

RECORD OF WELL



Location:

Town: Charles City (N E) (S W); County Floyd

SW-SE-NE sec. 12 T. 95 N., R. 16 W. Saint Charles Twp.

Well name and number City Well #3

Owner _____ Address _____

Tenant _____ Address _____

_____

Contractor McCarthy Well Co. Address Minneapolis

Drillers _____

Drilling dates 1929

Well data:

Elevations: Drilling curb 998± feet; Land surface _____ feet

_____

_____

Determined by _____

Topographic position _____

Total depth: Reported 1385 feet, Measured _____ feet

_____

Drilling method _____

Hole and casing data 70' of 20" pipe from 0-70'. 122' of 16" pipe from 0-122'.
(Give amount, size, kind, and depth of all casing; type and
10" liner from 598'-707'
position of seals and packers; cementing; how finished--perforated pipe, screen,
gravel pack, open hole, etc.)

_____

_____

_____

Original depth to water _____ ft. above/below _____ Date _____

Original elevation of water level _____ ft.; Source of data _____

_____

Sources of water: Principal _____; Others _____

_____

Production data: Date _____

Static depth to water 80 Measuring point _____

Pumping level 140 at 600 g.p.m.

_____ _____

_____ _____

_____ _____

Specific capacity _____ g.p.m. per ft. drawdown; Temperature _____ °F.

Pump data; Type pump _____ Column Dia. _____ Length _____

Cylinder or bowls: Dia. _____ Length _____ Suction pipe _____

Power _____ Airline _____

Estimated rate of production: _____ g.p.m. for _____ hrs. a day

Use of water _____

WATER ANALYSES (in parts per million)

Date sampled				
Sampled by				
Total solids				
Insoluble matter				
Alkalinity (Meo)				
Alkalinity (Phn)				
pH				
Fe_2O_3+ Mn_2O_3+Al_2O_3				
Alkali as sodium				
Calcium				
Magnesium				
Iron (unfiltered)				
Manganese				
Nitrate				
Fluoride				
Chloride				
Sulfate				
Bicarbonate				
Hardness (ppm)				
Hardness (gpg)				

Remarks _____

Laboratory data: Sample storage location _____

Sample range 70 - 1290 No. spls. 119 No. dupls. & cond. _____

Spls. prepared by _____ Washed range _____ by _____

Driller's log and cond. _____

Insoluble residues: Prepared by _____ Studied by _____ Strip log _____

Microscopic study Schuldt strip log —

Gen. log _____ Correl. by _____

City Council

MAYOR ..... A. R. EGGERT
COUNCILMEN-AT-LARGE ..... EDGAR BALL
BIM CASTLE
COUNCILMEN
FIRST WARD ..... C. A. BIRKHOLZ
SECOND WARD ..... F. J. CLARK
THIRD WARD ..... LAWRENCE GUTHART
FOURTH WARD ..... AUGUST SYLVESTER

City of
Charles City, Iowa

City Officers

CITY CLERK ..... J. W. McGEENEY
CITY ENGINEER ..... JAMES S. DAWSON
CITY SOLICITOR ..... E. C. HARDWIG
CHIEF OF POLICE ..... HENRY DeBOEST
STREET COMMISSIONER ..... O. H. UHE
WATER SUPT. ..... L. R. HIGHT
CITY TREASURER ..... W. LOREN PARR
CITY ASSESSOR ..... G. C BLUNT
HEALTH OFFICER ..... DR. O. H. BANTON
FIRE CHIEF ..... W. M. BLUNT
SUPT. OF SEWAGE DISP'S'L.. JAMES BEARD

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May 28 ,1940

Dr. H. G. Hershey ,

Iowa City , Iowa .

Dear Mr. Hershey:

We are cleaning our well No.3 by the St. Mary St. bridge and the drillers have a copy of McCarthy's driller's log which might be of interest to you. I list it below:

Material	Thickness	Depth	
Fill	7	7	
Sand & Gravel	40	47	
Lime Rock	47	94	
Lime Rock & Shale	10	104	
Shale	18	122	
Lime Rock & Shale	292	414	
Lime Rock	192	606	
Lime Rock & Shale	29	635	
Sticky Shale	73	708	
Sand Rock & Shale	37	745	
St.Peter Sand	31	776	(Water Flows)
Lime Rock	86	862	
Water dropped to 10' at 760			
Sand Rock	12	874	
Lime Rock	66	940	
Sand Rock	10	950	
Lime Rock	230	1180	
Jordan — Sand Rock	60	1240	
(Lime Rock & Sand Rock) Mixed	35	1275	
Shale	23	1298	
Lime Rock	32	1330	
Lime Rock & Shale Mixed	50	1380	

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This does not check with the geological report on this well which was drilled in 1928 but the total depth agrees with the records I find in the city records.

If you can remember , this well had a drawdown at least to the bowls of the pump, which is set at 180 ft. below the surface, on delivery of 500 GPM. We have now shot the well with dynamite, using 30# at a depth of 1230 ft. and 80# at a depth of 1200 ft. and the drillers have baled out quite a few yards of sand.